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(54) **ADAPTIVE THRESHOLDING USING LOOSE GRAY SCALE TEMPLATE MATCHING**

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(52) **U.S. Cl.** **345/596**
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(57) **ABSTRACT**

What is presented is a method for rendering gray half-toned images from a received image wherein the received image is bitmap data including at least a plurality of gray-scale pixel tiles that define the image. The method includes the steps of first receiving a gray image so as to extract pixel tile information of the received image. The next step is matching loosely the pixel tile information with at least one of a plurality of templates, wherein the match is determined from looseness intervals between the templates and the pixel tile information. Then, outputting a portion of enhanced pixel tile information wherein the enhanced pixel tile information is formed from data associated with a matching template. The output signals are such that a preferred thresholding of the image is performed.

14 Claims, 15 Drawing Sheets